Name:

at1110paper_practice_test (v107)

1. Solve the equation with factoring by grouping.

$$15x^2 + 10x + 18x + 12 \;=\; 0$$

$$(5x + 6)(3x + 2) = 0$$
$$x = \frac{-6}{5} \qquad x = \frac{-2}{3}$$

2. Solve the equation.

$$4x^2 - 9x - 4 \;=\; 2x^2 + 4x + 3$$

$$2x^2 - 13x - 7 = 0$$
$$(2x + 1)(x - 7) = 0$$
$$x = \frac{-1}{2} \qquad x = 7$$

3. Expand the following expression into standard form.

$$(3x - 4)^2$$

$$9x^2 - 12x - 12x + 16$$
$$9x^2 - 24x + 16$$

4. Factor the expression.

$$49x^2 - 9$$

$$(7x + 3)(7x - 3)$$

5. Expand the following expression into standard form.

$$(9x - 5)(9x + 5)$$

$81x^2 + 45x - 45x - 25$

$81x^2 - 25$

6. Solve the equation.

$$(4x - 9)(7x + 8) = 0$$

$x = \frac{9}{4}$ $x = \frac{-8}{7}$

7. Factor the expression.

$$x^2 - 15x + 56$$

$(x - 7)(x - 8)$

8. Expand the following expression into standard form.

$$(9x + 4)(3x - 8)$$

$27x^2 - 72x + 12x - 32$

$27x^2 - 60x - 32$